



THE JOINT CHIEFS OF STAFF
WASHINGTON 25, D.C.

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JCSM-996-62
14 December 1962

MEMORANDUM FOR THE SECRETARY OF DEFENSE

Subject: Air Defense for India (U)

1. The Joint Chiefs of Staff have conducted a separate review of the air defense problem in India in conjunction with their review of the report of the Special Presidential Mission to India (Harriman Report).

2. Based on the discussion of the various alternatives, as set forth in the Appendix hereto, the Joint Chiefs of Staff conclude that:

a. The United Kingdom should assume over-all responsibility for implementing the air defense program for India, with materiel and training assistance from other Commonwealth countries and the United States.

b. US interests in the Indian situation require that a degree of material assistance be rendered to meet Indian demands for air defense support.

c. Providing a completely self-sufficient air defense capability to the Indian armed forces is militarily, politically, and economically unsound.

d. At this time, the US air defense commitment in the mid-range period (to end of Calendar Year 1963) should be limited to provision of three fixed radars in the Bihar-Assam area, and, on a longer term basis, three mobile radars and retrofit of three squadrons of Indian aircraft with SIDEWINDER missiles.

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e. The United Kingdom, Canadian, and Australian commitment should provide for command and control communications, and fighter modernization (including air-to-air missiles) for 3 fighter squadrons, together with training support and operational assistance.

f. A US-UK team of air defense specialists should be sent to India to refine requirements within this commitment and prepare plans for siting equipment.

g. In recognition of the inadequacies of the foregoing measures, the United States at this time should approach the United Kingdom with the recommendation that the UK and Commonwealth Nations assure the Government of India that they will provide interim air defense forces to India in the event of renewed Chinese aggression if so requested. The position of the US on this matter should be that this Government will entertain requests from the Government of India for air defense forces in the event of renewed Chinese aggression, but that the US Government reserves the right of decision in this regard dependent upon the situation existing at the time of request.

h. Support for the Indian forces should be contingent upon Indian agreement that any Soviet military assistance will be limited to materiel and technical training in the use and maintenance of such Soviet materiel.

3. It is recommended that the Secretary of Defense:

a. Approve the foregoing conclusions.

b. Request the Secretary of State to initiate discussions on this basis with the Commonwealth nations involved.

c. Also request the Secretary of State to:

(1) Inform the Government of India of US views and intentions with respect to air defense assistance.

(2) Obtain approval for a team of air defense specialists to visit India to work with the Indian armed forces in refining requirements in planning the utilization of US-furnished equipment.

For the Joint Chiefs of Staff:

SIGNED

GEORGE W. ANDERSON
Acting Chairman
Joint Chiefs of Staff

Attachment

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APPENDIX

DISCUSSION

THE THREAT

1. The Chinese Communist Air and Naval Air Force air order of battle is estimated to include 1920 jet fighters (including 60 supersonic Farmer types), 30 jet and 40 prop-driven attack aircraft, 325 light jet bombers (Beagle), and 105 light and 15 medium propdriven bombers.
2. In operations against India, the 325 Chinese jet light bombers, with an effective radius of action of approximately 600 nautical miles, could attack only targets in Northeast India from airfields in Szechwan and Yunnan provinces. From these same locations, the 15 old World War II type medium bombers could reach to any target in India. There are only 6 airfields within 600 nautical miles of the disputed areas between India and China over 6000 feet long with concrete, asphalt, or macadam runways. However, there are 9 additional airfields of crushed rock or sod that could be used for a limited period of time. The high elevations of some of these airfields would further degrade the performance of the Chinese tactical aircraft.
3. Since there is no evidence of CHICOM tactical aircraft having operated from these airfields it is believed that this factor would further decrease their sortie and availability rates even if sufficient POL and other supplies were available either by previous stockpiling or current logistics.
4. If the Chinese air force were able to operate from Burma, or were able to seize airfields in the Bhramaputra valley, its capability would be greatly enhanced.

CAPABILITIES OF INDIAN AIR FORCE

5. The air defense capabilities of the Indian Air Force against the Chinese threat are extremely limited due primarily to the lack of ground environment. The radars are ancient and

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mostly oriented toward Pakistan. The radar capability is in- 1
 effective against high flying jet aircraft, and lack of moving 2
 target indicator capability degrades their effectiveness in 3
 mountainous terrain. 4

6. The Indian fighter force includes 27 Vampire NF-54 night 5
 fighters, 48 Mystere IV, 80 Hunter F-56, and 32 Gnat 1 tactically 6
 assigned for air defense. In addition there are two squadrons of 7
 Ouragons and one squadron of Vampire FB-52 fighter bombers 8
 tactically assigned. 9

7. The Hawker Hunter, Mystere IV, and Gnat fighters represent 10
 a fairly creditable day fighter capability. Even if modern 11
 radar were available, the Vampire night fighter would probably 12
 be ineffective against Chinese aircraft due to its slow speed 13
 and limited ceiling. 14

8. The personnel training and experience of the Indian Air 15
 Force provide a solid base for building up their air defense 16
 capability through the provision of modern equipment. 17

ANALYSIS OF THE REQUIREMENT

9. The Indian Air Force indicated to the US Military Assess- 18
 ment Team a requirement for 240 F-104G's, 3 RC-121 airborne 19
 early warning aircraft, and modern radars to provide complete 20
 coverage of Northern India. The total cost of this program would 21
 be about \$500 million. 22

10. The Military Assessment Team recommended that considera- 23
 tion be given to a degree of air defense to include radar early 24
 warning. The only specific short range air defense action 25
 recommended by the Team (Enclosure F of the Report) was to evaluate
 RC-121 capability to furnish Advance Early Warning over the northern
 border of India. In the mid-term (CY-1963) the team recommended 28
 that existing outmoded and ineffective radars (6 sites) be replaced
 by modern equipments, and 3 fighter squadrons be re-equipped 30

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with modern aircraft. Cost of the radar system to implement the team proposal would be about \$31. million. Aircraft for the three fighter squadrons (based on representative costs of 12 F-104G per squadron) would cost \$63 million. Communications and other facility costs would be additional and depend on siting and other factors. Delivery of the radars from new production could commence 14 months after a decision is made and be completed 10 months later. Provision of F-104G aircraft would depend on diversion from MAP and other scheduled recipients of European production.

11. The Military Assessment Team also observed that missiles such as HAWK or NIKE could be profitably employed, and that consideration should be given to providing mobile early warning radars for use in mountainous terrain.

12. The cost of providing complete air defense coverage of northern India is prohibitive. Therefore, the program to be implemented in the mid-term must be a compromise based on an evaluation of pure defense requirements, cost factors, and the likelihood of a CHICOM air attack against Indian cities in a campaign currently assessed as one having limited objectives. Within this context the following considerations materially influence the nature and scope of the defense package to be provided:

a. Prime Minister Nehru appears primarily interested in air defense from the standpoint of protecting Indian population centers. Whether his anxiety stems from humane considerations, a sense of overwhelming responsibility, or a belief that his political future could not stand further criticism of inadequate defense preparation is not clear. The fact remains that Indian demands for air defense assistance are urgent, and that Nehru's continued concern could preclude employment of Indian tactical air in a decisive situation if the Chinese reopen hostilities on a large scale.

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b. In the event of renewed hostilities, it would be desirable, and could be critical, to employ Indian tactical air to maximum advantage. Use of Indian air, in whatever attack or reconnaissance role is visualized, must take into account the possibility that Chinese air could be similarly employed. It should be noted, however, that any attempt on the part of the CHICOMs to employ this capability against Indian population centers would positively identify their objectives as other than limited and could result in UN action and possibly active US/UK military participation. For the CHICOMs to precipitate such a course of action would obviously expend the conflict which seems to be in contradiction to what is currently assessed as limited CHICOM objectives. Despite such considerations, an air defense capability to protect Indian ground forces, airfields, and military facilities is a valid military requirement.

c. The program must presuppose direct involvement of external forces, including air defense forces, if renewed Chinese aggression is on a scale requiring such participation. In such a situation, Commonwealth and US forces possess the capability to reduce the air threat, not only through deployments in direct support of India, but also through selectively enlarging the conflict so as to pin down the Chinese air force in other areas. Involvement of external forces in this manner also forces the Chinese to consider attack on Indian cities and bases as being subject to retaliation.

d. The system provided must have a maximum impact value, not only to be responsive to Indian concerns, but also to force the Chinese to consider a high loss rate if they should undertake limited attacks on Indian cities for psychological purposes.

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e. The system should be oriented toward the greatest threat and provide a base for reinforcement in an emergency as may be necessary. In this regard Northeast India is the critical area. The possibility of a Kashmir settlement in the mid-range period should be considered in this connection.

f. Another consideration is the possibility that the Indians might seek increased assistance from the Soviets, if Western support is not provided. Recent reports indicate agreement by the Soviets to furnish a limited number of MIG-21's to the Indians. Although such a development is desirable as an indication of, and a stimulant to, a widened rift in Sino-Soviet relations, Soviet military assistance to India on a large-scale is not to be encouraged. Although it is doubtful that the Soviets would be able to meet Indian demands fully, an early positive response to the air defense problem on the part of the United States and Commonwealth would preclude Soviet participation on an undesirable scale. In particular, steps should be taken with the Indians to insure that the Soviets do not become involved in operational planning assistance and advice to the Indian Air Force, and that precautions are observed with respect to security of any Western equipment furnished.

g. The Government of Pakistan should be fully informed of the air defense assistance given to India, particularly in view of the recent US/UK efforts to reduce Pakistan air defense requirements as reflected in CENTO plans. From the Pakistani point of view, assistance must be kept to a bare minimum to meet the threat, and even this would be difficult to justify to Pakistan despite India's larger size, the immediacy of the threat, and the outdated Indian equipment. Orientation of this assistance toward the Northeast would be another point in its favor, as far as Pakistan is concerned.

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h. Leaving a gap between Indian capability and the requirement has certain advantages in that it stimulates continuation of India's recent turning toward the West. Similarly, India may realize increasingly that her relations with Pakistan have a bearing on the defense of India. For example, although it is not to be expected soon, coordination of air defense systems in Pakistan and India would enhance the capability of both, and might provide a reasonable military justification for the initial steps of an etente between these two countries.

13. In consideration of the foregoing factors, a reasonably adequate air defense system for Indian should be based on the following:

a. Provide three fixed radar sites in the Bihar-Assam area, with one AN/FPS-20 search radar, one AN/FPS-6 height finder, and associated on-site communications. Estimated cost for the three sites, including construction, would be about \$11.5 million.

b. On a long-term basis, provide three mobile radar sites with moving target indicators for use in mountainous terrain, as augmentation for the fixed system, and/or for utilization in tactical air operations. Estimated cost would be about \$12.5 million. The only current source of mobile radars is withdrawal from US operational units or through production.

c. Retrofit 3 squadrons of Indian aircraft with Sidewinder air-to-air missiles. Estimated cost of missiles and necessary ground support would be about \$2 million, exclusive of aircraft rewiring and shackles.

d. Transition the Vampire night fighter squadron and the two Ouragon fighter-bomber squadrons to a modern fighter interceptor at 12 aircraft per squadron. Estimated cost (based on F-104G cost) would be \$63 million.

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e. Provide associated air defense control centers and communications. An estimate of the cost could be approximately \$7 million, depending upon site selection.

ALTERNATIVE MEANS OF MEETING
THE REQUIREMENT

14. The US position has been that the UK should take the lead in assistance to India. Because Indian Air Force equipment is primarily of British origin, and in order to promote Indian cooperation with the Commonwealth, the UK, rather than the US should take the lead in any build-up of the Indian Air Force. Additionally, UK support for India against China could result in change in the UK attitude toward continued trade with Communist China. An attempt should be made to enlist support of other Commonwealth countries, particularly Canada and Australia, for the same reasons. British assumption of over-all responsibility for implementing the air defense program also would insure continuity of effort, unity of direction, and complete compatibility of equipment from the outset.

15. It will be difficult for any single nation to shoulder the entire financial burden of the recommended program. However, consideration should be given to arrangement whereby the UK would take on the air defense program with the other nations sharing costs of the ground force program and other air assistance. This arrangement would lead toward maximum integration of program effort, but US ability to affect the course of the program would be minimal.

16. Costs of the air defense program could be shared by an arrangement whereby the US provided the radars and Sidewinders, together with necessary training, and the Commonwealth provided

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the aircraft and command and control communications. This formula appears to be an equitable sharing of costs, and would provide for continuous US involvement in program implementation.

17. As has been noted, a minimum of two years will be required to complete the program. The major limitation is the availability of equipment, particularly the mobile radar sets. Training time will be minimal because of the experienced personnel in the Indian Air Force. Should the Chinese renew hostilities in the near future, it may be necessary to deploy Commonwealth or US forces depending on the situation, and plans should be made for this contingency.

18. In a letter* to Prime Minister McMillan, the President of the United States proposed that "we would do well to consider the extent to which we could agree to provide a certain amount of air defense operated by our own forces should the Indians need it. I would suggest that we undertake to provide the radar and other ground equipment necessary while you and some of the Commonwealth countries accept the commitment to send an appropriate number of fighter squadrons to India should the need arise." The President's proposal, if agreed, will require combined US-UK planning for the contingency as stated. US-UK plans could be developed to provide the entire air defense in an emergency. However, this alternative does not allow for a minimal defense in the period required to deploy appropriate US-UK forces and would probably not satisfy the Indian Government. The recommended program visualizes augmentation by external forces as being necessary in the event of a large scale aggression in South Asia.

19. In the interim period, another, but undesirable, alternative would be to deploy US and Commonwealth forces to India now. This alternative has the advantage of getting forces on

* State Msg 2988 to London, 5 December 1962

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the ground quickly, and could have an inhibiting psychological effect on the Chinese Communists. However, it would entail a degree of commitment which could involve the US in combat action at a time, place or under circumstances not of our own choosing. Furthermore, if this alternative were adopted, the US could be committed on an indefinite basis for an open-end responsibility for air defense in India. Even on a temporary basis, this alternative would pin down costly forces required for contingencies. For example, a tactical air control group sent to India to provide radar coverage represents an investment of \$200 million in total unit equipment. This solution is not warranted by the current situation.

20. In order to stimulate UK leadership in meeting the problem, consideration should be given to providing US air defense units in the UK to release Lightnings for Indian use. This proposal might help the British also to stretch out costs of early implementation of the program.

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